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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/672,814	09/26/2003	Afshin Falsafi	58698US002	8914

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3M INNOVATIVE PROPERTIES COMPANY
PO BOX 33427
ST. PAUL, MN 55133-3427

EXAMINER	
YOON, TAE H	

ART UNIT	PAPER NUMBER
1714	

DATE MAILED: 07/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/672,814	FALSAFI ET AL.	
	Examiner	Art Unit	
	Tae H. Yoon	1714	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 April 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-62* is/are pending in the application.

4a) Of the above claim(s) *18-62* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Applicant's election with traverse of Group I, claims 1-17, in the reply filed on April 24, 2006 is acknowledged. The traversal is on the ground(s) that there is an undue burden on applicant by requiring payment for a separate filing fee and there is little burden on the examiner for an additional consideration and search. This is not found persuasive because such argument is not the basis for the restriction requirement and there is a serious burden for examining all claims due to very limited time allowed to the examiner.

The requirement is still deemed proper and is therefore made FINAL.

The recited expression such as"(e.g. xylitol)" in claim 2 is objected since it is a range within a range, and a separate claim for a narrower range is suggested. Also, blank lines for U.S. Pat. Application Serial No. at pages 12, 20 and 47 are objected.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 2, 4, 5, 8, 9, 11, 12, 14 and 16 are rejected under 35 U.S.C. 102(a) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over EP 1 269 967 A1.

EP teaches a dental composition kit comprising an ethylenically unsaturated compound, an aromatic secondary and/or tertiary amine (reducing agent), glass filler, a peroxide (electron acceptor) and a salt of an aromatic sulfinic acid in abstract. The instant tetramethylammonium salt of benzenesulfinic acid is taught in [0034].

Thus, the instant invention lacks novelty.

Claims 1-17 are rejected under 35 U.S.C. 103(a) as obvious over EP 1 269 967 A1 in view of Nikutowski et al (US 6,528,555) or Kawashima et al (US 5,486,544).

The instant invention further recites employing a photobleachable dye and/or a sensitizer over EP. However, EP teaches employing photopolymerization initiator, dye and/or pigment in [0050]. Nikutowski et al teach the utilization of the instant photobleachable dye and/or a sensitizer at col. 5, line 10 to col. 6, line 67 and col. 8, line 8 to col. 9, line 39 in a dental adhesive. Kawashima et al teach that photoinitiators are photosensitive dyes and diketones at col. 7, lines 36-43 and they meet the instant photobleachable dye and sensitizer.

It would have been obvious to one skilled in the art at the time of invention to utilize the art well known photobleachable dye and/or a sensitizer of Nikutowski et al or Kawashima et al in EP since EP teaches employing photopolymerization initiator and/or dye and since the use of a sensitizer in a photopolymerization initiator system and of a photobleachable dye in dental adhesive is a routine practice in the art as evidenced by Nikutowski et al and since Kawashima et al teach that photoinitiators are photosensitive dyes.

Claims 1, 2 and 4-16 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Mukai et al (US 4,983,644).

Mukai et al teach a dental adhesive composition comprising an ethylenically unsaturated monomer and at least one initiator selected from the group consisting of redox polymerization initiator and photo polymerization initiator in abstract. Said at least one initiator encompasses the use of both initiators. Said redox polymerization initiator and photo polymerization initiator meeting the instant claims are further taught at col. 6, line 60 to col. 8, line 16, and the instant sulfinic acid salt is taught at col. 7, lines 50-53 and col. 8, line 8. The use of filler and colorants is taught at col. 8, lines 17-27.

Thus, the instant invention lacks novelty.

Claims 1-17 are rejected under 35 U.S.C. 103(a) as obvious over Mukai et al (US 4,983,644) in view of Nikutowski et al (US 6,528,555) or Kawashima et al (US 5,486,544).

The instant invention further recites employing a photobleachable dye and/or a sensitizer over Mukai et al. However, Mukai et al teach employing colorants at col. 8, lines 17-20. Nikutowski et al teach the utilization of the instant photobleachable dye and/or a sensitizer at col. 5, line 10 to col. 6, line 67 and col. 8, line 8 to col. 9, line 39 in a dental adhesive. Kawashima et al teach that photoinitiators are photosensitive dyes and diketones at col. 7, lines 36-43 and they meet the instant photobleachable dye and sensitizer.

It would have been obvious to one skilled in the art at the time of invention to utilize the art well known photobleachable dye which is a colorant of Nikutowski et al or Kawashima et al in Mukai et al since Mukai et al teaches employing colorants and since the use of a photobleachable dye in dental adhesive is a routine practice in the art as evidenced by Nikutowski et al and since Kawashima et al teach that photoinitiators are photosensitive dyes.

Claims 1-17 are rejected under 35 U.S.C. 103(a) as obvious over Kawashima et al (US 5,486,544).

Kawashima et al teach a photopolymerizable composition comprising an ethylenically unsaturated monomer and a salt of aromatic sulfinate in abstract and col. 6, lines 16-55. One of said salt of aromatic sulfinate is quaternary ammonium salt (col. 3, lines 1-2). Kawashima et al also teach employing a peroxide, amine, photosensitive dyes and diketones, and additives such as fillers at col. 7, lines 1-61.

It would have been obvious to one skilled in the art at the time of invention to utilize said quaternary ammonium salt of aromatic sulfinate Kawashima et al since choosing said quaternary ammonium as a cation would be a *prima facie* obviousness.

Claims 1-6, 12, 13 and 17 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Shimada et al (US 2003/0054288 A1).

Shimada et al teach a photosensitive composition comprising an ethylenically unsaturated monomer and an ammonium salt of aromatic sulfinate in abstract. Photosensitive liquid 2 in the table on page 43 shows a composition comprising a polymerizable component, radical generator ([SA-20]) and salt of Victoria pure Blue. Said salt of Victoria pure Blue is a photobleachable dye having absorbion at 700-1200 nm ([0095]-[0098]). Said radical generator is taught at page 8 and it is a sulfonium salt (col. 8, [0041]). However, Shimada et al teach and equate said sulfonium salt and ammonium salt in [0015]. Thus, the use of said ammonium salt of [SA-20] in said photosensitive liquid 2 would be anticipation.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tae H. Yoon whose telephone number is (571) 272-1128. The examiner can normally be reached on Mon-Thu.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (571) 272-1119. The fax phone

number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Tae H Yoon
Primary Examiner
Art Unit 1714

THY/July 10, 2006